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36 ABSTRACT

An integrated repeater includes a housing having opposing sides, a donor antenna mounted on one of the opposing sides, a null antenna mounted on the other of the opposing sides, and repeater electronics mounted in the housing and operatively interconnecting the donor antenna and the null antenna. The repeater electronics include a beamforming arrangement for creating a desired antenna pattern of the donor antenna relative to a base station and a desired antenna pattern of the null antenna relative to subscriber equipment, and interference cancellation electronics for cancelling interference feedback signals between the donor antenna and the null antenna in both an uplink path and a downlink path.